

IV. AMENDMENTS TO THE DRAWINGS

- THE DRAWINGS OF THE PATENT IS HEREBY AMENDED AS SET FORTH BELOW:
 - **There are no amendments to the drawings.**

V. REMARKS/ARGUMENTS

- STATUS OF CLAIMS

With this “RESPONSE TO OFFICE ACTION,” claims 20 through 30 are pending. Claim 31 has been cancelled without prejudice.

- AMENDMENTS TO CLAIMS

The claims have been amended as shown in section III. No new matter has been added.

- AMENDMENTS TO SPECIFICATIONS

Paragraph [0017] of the specification has been amended. The antecedent basis for the amended material is claim 20. Paragraph [0018] of the specification has been amended to improve clarity. No new matter has been added.

- OBJECTIONS

- OBJECTIONS TO CLAIMS

- Examiner's Stance

The Examiner has objected to claims 20-31 on the basis that the claimed Ag-Cu-Ge-B alloy is not a “ternary” alloy.

- Applicants' Response

The Applicant has amended claims 20-30 so as to remove the descriptive term “ternary.” Claim 31 has been cancelled without prejudice.

- **REJECTIONS**

REJECTIONS UNDER 35 U.S.C. §103(a)

- Examiner's Stance

The Examiner has rejected claims 20 through 27, under 35 U.S.C. §103(a), as being obvious in view of WO 02/095082, GB 2355990, or US 6,726,877 to Eccles. Specifically, the Examiner states that WO 02/095082 discloses the same Ag alloy (page 1, lines 25-29 and page 11, lines 29-31). The Examiner further alleges that GB 2355990 discloses another claimed Ag alloy (page 2, lines 8-16 and page 4, lines 20-23). And, in addition, the Examiner alleges that Eccles (US Patent 6,726,877) discloses the another claimed alloy (col. 1; line 27 and col 2, lines 55-65). The Examiner states that the prior art compounds bracket the Applicant's claimed compounds and that obviousness typically exists when ranges of a claimed composition overlap the ranges disclosed in prior art.

The Examiner further rejects claims 28 through 31, under 35 U.S.C. §103(a), as being obvious in view of WO 02/095082, GB 2355990, or US 6,726,877 to Eccles, in further view of GB 1130540. The Examiner alleges that while the first three cited prior art references do not teach surface treating of the silver alloy, GB 1130540 teaches surface treatment with stearyl and cetyl mercaptans and thioglycolates.

- Applicants' Response

Claims 20 through 30 have been amended into method claims directed to the production of a silver alloy which is resistant to the development of porosity, brittleness and sagging when heated for joining or torch annealing operations.

Applicant notes that the basis for factual inquires, with respect to findings of obviousness under 35 U.S.C. 103, are set forth in accordance with *Graham v. John Deere Co.*, 383 U.S. 1, 148 U.S.P.Q. 459 (1966), the primary indicia being summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.

3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or non-obviousness.

In determining the scope and contents of the prior art (step 1 of the primary indicia), the following paragraphs are extracted from WO 02/095082 indicating that Ag concentrations between 96% and 98% are suitable for the practice of the prior art:

The ternary Ag-Cu-Ge alloys and quaternary Ag-Cu-Zn-Ge alloys that can suitably be prepared by the method of the present invention are those having a silver content of at least 30%, preferably at least 60%, more preferably at least 80%, and most preferably at least 92.5%, by weight of the alloy, up to a maximum of no more than 98%, preferably no more than 97%. (page 10; lines 13-17).

In a preferred embodiment, the alloy is a ternary alloy consisting, apart from impurities and any grain refiner, of 80% to 96% silver, 0.1 % to 5% germanium and 1 % to 19.9% copper, by weight of the alloy. (page 12; lines 21-23).

In a more preferred embodiment, the alloy is a ternary alloy consisting, apart from impurities and grain refiner, of 92.5% to 98% silver, 0.3% to 3% germanium and 1% to 7.2% copper, by weight of the alloy, together with 1 ppm to 40 ppm boron as grain refiner. (page 12; lines 25-27)

In a further preferred embodiment, the alloy is a ternary alloy consisting, apart from impurities and grain refiner, of 92.5% to 96% silver, 0.5 % to 2% germanium, and 1% to 7% copper, by weight of the alloy, together with 1 ppm to 40 ppm boron as grain refiner. (page 12; lines 29-31).

The claims of WO 02/095082 similarly define the maximum Ag concentration in the range of 96% to 98% as follows:

20. A method according to claim 19 wherein the ternary alloy consists, apart from impurities and any grain refiner, of 80 to 96% silver, 0.1 to 5% germanium and 1

to 19.9% copper, by weight of the alloy.

21. A method according to claim 19 wherein the ternary alloy consists, apart from impurities and grain refiner, of 92.5 to 98% silver, 0.3 to 3% germanium, and 1 to 7.2% copper, by weight of the alloy, together with 1 ppm to 40 ppm boron as grain refiner.

22. A method according to claim 19 wherein the ternary alloy consists, apart from impurities and grain refiner, of 92.5 to 96% silver, 0.5 to 2% germanium, and 1 to 7% copper, by weight of the alloy, together with 1 ppm to 40 ppm boron as grain refiner.

In contrast to the prior art, the instant application requires that the Ag content not exceed 95.5% as stated in claim 20 and U.S patent Application Publication No. 2007/0009375:

[0019] In the above alloy, preferred Ag contents range from about 94.0 to about 95.5 wt %, lower values being preferred for reducing the expense of the silver used. It has been found, surprisingly, that if the Ag content is increased to 96 wt % it is difficult to avoid firestain even at high Ge contents.

Thus, with reference to the primary indicia for a finding of obviousness, step 1 and step 2 are not satisfied in that the cited prior art does not teach the limitation of Ag concentration of no greater than 95.5% to avoid firestain. Furthermore, with respect to step 3 of the indicia, one of ordinary skill would not be expected to recognize this critical dependency based on the absence of mention in the cited prior art.

WO 02/095082 discloses no more than the theoretical possibility of increasing the silver content of Ag-Cu-Ge based alloys above the Sterling standard of 92.5 wt%. There is no disclosure or suggestion that such alloys might exhibit an overall better combination of properties to justify the increased silver content. The Examiner alleges that the prior art discloses alloys bracketing the claimed alloys and that a skilled person would consider the disclosed alloys in the expectation that alloys of similar composition would have similar properties. What the Applicants have discovered is that this is not the case, and that it is easier to post-treat the

claimed alloys during jewellery manufacturing without the problems encountered when using alloys with silver content at or close to the standard Sterling value.

With respect to GB 235590, similar arguments may be made in the context of the primary indicia for obviousness. In GB 235590, the most restrictive allowed Ag concentration is given in claim 6, as follows:

6. An alloy according to any preceding claim, wherein the silver content is 92.5% or greater.

Furthermore, the subject of firestain is not addressed anywhere in GB 235590.

With respect to Eccles (United States Patent No. 6,726,877), no teaching or claim of the special firestain related properties associated with an Ag concentration range of 94.0% to 95.5% is present.

Thus neither WO 02/095082, GB 2355990 or US Patent 6,726,877, taken singly or in combination, provides an adequate basis for obviousness.

With respect to the rejection of claims 28 through 31, under 35 U.S.C. §103(a), as being obvious in view of WO 02/095082, GB 2355990, or US 6,726,877 to Eccles, in further view of GB 1130540, the Applicant calls the Examiner's attention to the fact that GB 1130540 does not remedy the inadequacies of the cited prior-art references with respect to establishing a prima facie case of obviousness.

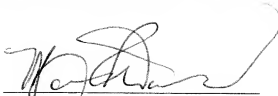
The Applicant respectfully submits that the Examiner's rejections should be withdrawn and the pending claims should be allowed.

CONCLUSION TO REMARKS

Applicant asserts that this response is fully responsive to the Examiner's Office Action dated June 29, 2007. In view of the above, it is respectfully submitted that the subject matter of the pending claims is patentable over the references cited. Applicant respectfully seeks early allowance of the pending claims.

November 20, 2007

Respectfully Submitted,

A handwritten signature in black ink, appearing to read 'Marvin R. Wachs', is written over a horizontal line.

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VI. APPENDIX

- *No appendix is intended to be attached*